

REMARKS

The Office Action of October 5, 2006, has been carefully reviewed, and in view of the above amendments and the following remarks, reconsideration and allowance of the pending claims are respectfully requested.

In the above Office Action, claims 1-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Uchino et al.* (U.S. Patent No. 6,001,068) in view of *Ishida et al.* (U.S. Patent No. 6,328,822).

The primary reference upon which the Examiner relies, *Uchino*, discloses, in lines 38-45 of column 3, a guide wire 1 comprising a first wire A located at the distal end of the guide wire and having an appropriate elasticity, a second wire B located at the proximal end of the guide wire and having a flexural rigidity greater than that of said first wire and a tubular connector 12 for joining the first and second wires A, B. The material for the tubular connector 12 is preferably the same or the same kind of metal as that for the first wire A or the second wire B, more preferably the same or the same kind of metal as that for the second wire B. Col. 5, lines 11-17. The connector 12 has a groove (or grooves) or a slit (or slits) or both of them formed in its portion on the distal side of a boundary 124 between the first wire A and the second wire B. Thus, *Uchino* teaches changing the flexural rigidity smoothly from the flexural rigidity of the first wire A to that of the second wire B by using a material having the same rigidity as that of the second wire B and forming slits or grooves in the interval or pitch which becomes smaller toward the end of the tubular connector 12 on the first wire A side and becomes larger toward the boundary 12 as shown in Figures 1-3 thereof. Col. 5, lines 49-58. As such, *Uchino* discloses a first wire A connected directly to a second wire B. *Uchino* does not disclose an intermediate

portion, or still further, an intermediate portion having a gradient physical property, as recited in claims 1, 12, 13, and 14.

The secondary reference upon which the Examiner relies, *Ishida*, merely discloses that conventional graded metallic materials having gradually changing mixing ratios have been produced by mixing different material powders at gradually changing mixing ratios to prepare a plurality of mixed powder sheets having gradually changing mixing ratios, laminating the mixed powder sheets along the gradually changing mixing ratios, compacting and sintering them. *Ishida* further notes that functionally graded materials produced by such a method cannot be rolled or drawn, and they can be formed to desired shapes only by cutting. Thus, they are not only very expensive but also cannot be formed into complicated shapes. *Ishida* does not disclose or suggest providing a functionally graded material as an intermediate portion between the two materials. Hence, *Ishida* does not provide the teaching found lacking in *Ushida* for an intermediate portion.

In summary, even combining the teaching of *Uchino* with *Ishida* as proposed by the Examiner, the resultant guide wire would not suggest the following constructions:

1. " an intermediate portion provided between said distal end side portion and said proximal end side portion, having a proximal end and a distal end, and formed of a metallic material mixture of said first metallic material and said second metallic material, wherein said intermediate portion comprises a gradient physical property portion in which a weight ratio of said first metallic material in the metallic material mixture decreases and a weight ratio of said second metallic material in the metallic

material mixture increases, from the distal end side portion toward the proximal end side portion;" or

2. "said distal end of said intermediate portion is joined to said proximal end of said distal end side portion and said proximal end of said intermediate portion is joined to said distal end of said proximal end side portion."

CONCLUSION

In view of the above amendments and remarks, Applicants respectfully submit that the claims of the present application are now in condition for allowance, and an early indication of the same is earnestly solicited.


Should any questions arise in connection with this application or should the Examiner believe that a telephone conference would be helpful in resolving any remaining issues pertaining to this application; the Examiner is kindly invited to call the undersigned counsel for Applicants regarding the same.

Respectfully submitted,

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